

## Budget for Project Period

Principal Investigator (Last, First): Zhang, Qi

### COMPOSITE BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD

10/01/18 to 09/30/19

From: To:	10/01/2018 09/30/2019 Year 1			
<b>BUDGET CATEGORY</b>				
PERSONNEL: <i>Salary and fringe benefits.</i>	\$38,544			
TRAVEL	\$8,201			
MATERIALS & SUPPLIES	\$13,255			
EQUIPMENT	\$0			
CONSULTANT	\$0			
SUBRECIPIENT	\$0			
OTHER DIRECT COSTS (ODC)	<i>Subject to IDC Calc</i>			
ODC #1	<i>Y</i>	\$0		
ODC #2	<i>Y</i>	\$0		
ODC #3	<i>Y</i>	\$0		
ODC #4	<i>Y</i>	\$0		
ODC #5	<i>Y</i>	\$0		
ODC #6	<i>Y</i>	\$0		
<b>TOTAL DIRECT COSTS</b>		<b>\$60,000</b>		
Indirect (F&A) Costs	<i>Rate: 25%</i>	<i>F&amp;A Base MTDC *</i>		
		\$60,000		
		<b>\$15,000</b>		
<b>TOTAL COSTS PER YEAR</b>		<b>\$75,000</b>		
<b>TOTAL COSTS FOR PROJECT</b>				

\* MTDC = Modified Total Direct Cost

**JUSTIFICATION.** See Exhibit B1 - Follow the budget justification instructions.

## Exhibit B1

### Budget Justification

*The Budget Justification will include the following items in this format.*

#### Personnel

**Name.** Starting with the Principal Investigator list the names of all known personnel who will be involved on the project for each year of the proposed project period. Include all collaborating investigators, individuals in training, technical and support staff or include as "to be determined" (TBD).

**Role on Project.** For all personnel by name, position, function, and a percentage level of effort (as appropriate), including "to-be-determined" positions.

Individual name	Title	Monthly salary	Est. months	% of effort	Total salary requested
Dr. Qi Zhang	Professor	\$11,817	0.5	4.167%	\$5,909
TBN	Postdoc	\$4,468	6	50%	\$26,808

#### SALARIES: \$32,796

##### **Dr. Qi Zhang (Principal Investigator / Professor): \$5,909**

Funding support in the amount of \$5,909 is requested to cover salary for Dr. Qi Zhang who will contribute 0.5 summer months of effort (4.167% effort based on Annual FTE) to the project in year 1 (monthly rate is \$11,817). Dr. Zhang will be responsible for overseeing all related work for this project.

##### **To Be Named (Postdoctoral Scholar, Level 2): \$26,808**

\$26,808 in funding support is requested for the employment of a To Be Named Level 2, Postdoctoral Scholar. The Postdoctoral Scholar will be employed for 12 months at 50.0% time per month for the duration of the project (monthly rate is \$4,468). They will be responsible for conducting the field experiments and performing associated data analysis.

#### **Fringe Benefits.**

*In accordance with University policy, explain the costs included in the budgeted fringe benefit percentages used, which could include tuition/fee remission for qualifying personnel to the extent that such costs are provided for by University policy, to estimate the fringe benefit expenses on Exhibit B.*

Individual name	Base (\$)	Rate (%)	Cost
Dr. Qi Zhang	\$5,909	17.8%	\$1,052
TBN	\$26,808	17.8%	\$4,772
Total benefits cost	\$5,824		

#### BENEFITS: \$5,748

Benefit costs are based on composite benefit rates. Dr. Zhang will be subject to the estimated rate of 17.8%. The rates for the Postdoctoral Scholar are based on the estimated rates of 17.8%.

#### Travel

*Itemize all travel requests separately by trip and justify in Exhibit B1, in accordance with University travel guidelines. Provide the purpose, destination, travelers (name or position/role), and duration of each trip. Include detail on airfare, lodging and mileage expenses, if applicable. Should the application include a request for travel outside of the state of California, justify the need for those out-of-state trips separately and completely.*

#### TRAVEL: \$8,201

##### **Domestic Travel: \$8,201**

Funding supporting the amount of \$8,201 is requested to support travel that will be incurred during the 1st year of this project. A breakdown of the cost is shown on the following table: 1 staff will need to stay at Fresno to make measurements during the one month field campaign, 1 support staff will need to travel to Fresno to assist with calibration, trouble shooting of the instruments during the field campaign. .

<b>TRAVEL</b>	<b>International?</b>	<b>Period 1</b>
Field Campaign (31Days) - 1 Traveler	No	
Lodging @ \$120/night x 31 nights	No	3,720
Meal & Incidental Expenses @ \$50 per day x 31 days	No	1,550
Personal Car Mileage: Davis <-> Fresno: 400 Miles Round Trip x 2 Trips @ \$0.545 per mile	No	436
Daily Personal Car mileage @ 30 miles per day @ \$0.545 per mile x 31 days	No	507
	No	
Support Staff Travel to assist with experiment (7 Days) - 1 Traveler	No	
Lodging x 1 Rooms @ \$120/night/rm x 6 nights	No	720
Meal & Incidental Expenses @ \$50 per day x 7 days x 1 traveler	No	1,050
Personal Car Mileage: Davis <-> Fresno: 400 Miles Round Trip @ \$0.545 per mile	No	218
	No	
	No	
	No	
<b>Total Domestic Travel</b>		<b>8,201</b>
<b>Total International Travel</b>		<b>0</b>
<b>Total Travel</b>		<b>8,201</b>

## Materials and Supplies

Itemize materials supplies in separate categories. Include a complete justification of the project's need for these items. Theft sensitive equipment (under \$5,000) must be justified and tracked separately in accordance with State Contracting Manual Section 7.29.

### MATERIALS AND SUPPLIES: \$13,255

Funds totaling \$13,255 are requested to support material and supply costs associated with the operation of a soot-particle high-resolution time-of-flight aerosol mass spectrometer, a high volume PM2.5 sampler, and an IMPROVE PM2.5 sampler during the field study at Fresno and the analysis of filter samples in Zhang's Laboratory at 4422 Meyer Hall. An additional \$300 is requested for the purpose of hard drives for storing the project data. A breakdown of the cost is shown on the following table:

<b>OTHER DIRECT COSTS</b>	
<b>Materials and Supplies</b>	<b>Period 1</b>
AMS Turbon pump refurbish	3,600
Swagelok tubing and fittings	1,000
AMS, SMPS, TD consumables (filament, critical orifice, filters, Po strips...)	1,200
AMS MCP replacement	3,600
Filter samples collection and processing	2,200
Chemicals, standards, glassware, and other supplies for chemical analysis	855
Ion chromatograph columns, chemicals, and supplies	500
Hard Drives for Data Storage	300
<b>Total Materials and Supplies</b>	<b>13,255</b>

## Equipment

List each item of equipment (greater than or equal to \$5,000 with a useful life of more than one year) with amount requested separately and justify each.

Not Applicable

## Consultant Costs

Consultants are individuals/organizations who provide expert advisory or other services for brief or limited periods and do not provide a percentage of effort to the project or program. Consultants are not involved in the scientific or technical direction of the project as a whole.

Provide the names and organizational affiliations of all consultants. Describe the services to be performed, and include the number of days of anticipated consultation, the expected rate of compensation, travel, per diem, and other related costs.

Not Applicable

## Subawardee (Consortium/Subrecipient) Costs

Each participating consortium organization must submit a separate detailed budget for every year in the project period in Exhibit B2 Subcontracts. Include a complete justification for the need for any subawardee listed in the application.

Not Applicable

**Other Direct Costs**

*Itemize any other expenses by category and cost. Specifically justify costs that may typically be treated as indirect costs. For example, if insurance, telecommunication, or IT costs are charged as a direct expense, explain reason and methodology.*

Not Applicable

**Rent**

*If the Scope of Work will be performed in an off-campus facility rented from a third party for a specific project or projects, then rent may be charged as a direct expense to the award.*

Not Applicable

**Indirect (F&A) Costs**

*Indirect costs are calculated in accordance with the budgeted indirect cost rate in Exhibit B.*

**INDIRECT COSTS: \$15,000**

Per the memorandum of understanding between the University of California and the State of California indirect costs have been calculated at 25% Modified Total Direct Cost (MTDC) for the duration of the project.